Amendments to the Specification

Please amend the paragraph from lines 13 to 24 on page 1 to read

During the drilling phase of the construction of a hydrocarbon wellbore, the length of the drillstring in the borehole is used to estimate the measured depth (or along hole length) of a borehole, it is assumed that the pipe is inelastic and therefore does not stretch. However, discrepancies in the length of the borehole estimated at surface during rig operations and the actual length of the borehole there may cause gaps or lost data, when the uncorrected depth is used with logs of data measured during drilling with sensors mounted on the drillstring, such as LWD and MWD logs.

Please amend the paragraph from lines 23 to 30 on page 3 to read

3) The rig operation is computed preferably as described in co-pending US Patent Application Serial No. 10/400,125 entitled "System and Method for Rig State Detection," filed on 26 March 2003, and now US patent 7,128,167 which is a continuation-in-part of co-pending US Patent Application Serial No. 10/330,634 filed on 27 December 2002. Both of these applications are hereby incorporated herein by reference.

Please amend the paragraph from lines 6 to 13 on page 4 to read

7) From these inputs the model is used to compute the hookload. If the hookload is within tolerances equal to the measured hookload the stress profile is accepted and used to compute the pipe stretch. If it is not then the friction factor or the weight on bit are varied until the hookload and the calculated hookloads match. The models used here and in step 4 above are preferably known models such as Drillsafe™.

Please amend the paragraph from line23 on page 4 to line 16 on page 5 to read

Figure 2 shows an example of data prior to correction according to a preferred embodiment of the invention. The first frame of Figure 2 shows a surface time verse depth plot, the first section is drilling without surface rotation. As a result all of the

friction force is opposing the motion of the drillstring along the hole. As a result whilst drilling the direction of the friction force is towards surface. The driller then stops drill pulls the drillstring off bottom and then runs back to bottom rotating the drillstring, when rotating the friction force opposes the direction of rotation and as a result the frictional force along the borehole falls to close to zero. This results in an increase in the tension in the pipe and therefore an increase in the pipe stretch. As [[~~as~~]] a result the position of the bottom of the hole as ~~measure from~~ measured from drillstring length at surface appears shallower than its true position. In the second frame the resistivity data are shown plot against the same time scale. In the third frame the resistivity data are plotted against the apparent depth at which they were measured. It can be seen that there is a section of data in lighter grey that in terms of depths overlaps previously recorded data. Conventionally, these data would be discarded. The darker line represents the data that would be kept. Thus, failure to compensate for errors in depth results not only in lost data but also the thickness of the formation section appearing thinner.

Please amend the paragraph from lines 6 to 13 on page 4 to read

Figure 3 shows ~~data that has been corrected~~ corrections according to a preferred embodiment of the invention. The stress profile and the pipe stretch have been calculated according to an appropriate model for the rig operation. Note that in the first frame, the depth at which drilling resumes is very close to the depth at which it stopped. Secondly, the measured resisitivities are properly allocated to the measure depth. Thus, according this embodiment of the invention, there is no loss of data or gaps, (the remaining grey points are recorded off bottom).